

10/628,296

## WEST Search History

DATE: Friday, February 24, 2006

Hide?	Set Name	Query	Hit Count
		<i>DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L1	allergen	8334
<input type="checkbox"/>	L2	L1 and pollen	2216
<input type="checkbox"/>	L3	L2 and (transgenic or transform?)	546
<input type="checkbox"/>	L4	L3 and lol	42
<input type="checkbox"/>	L5	L4 and expansin	4
<input type="checkbox"/>	L7	l3 and (lol p 3 or lol p III)	7

END OF SEARCH HISTORY

10/628,296

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IPC reform  
NEWS 8 DEC 23 New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/  
USPAT2  
NEWS 9 JAN 13 IPC 8 searching in IFIPAT, IFIUDB, and IFICDB  
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INPADOC  
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NEWS 12 JAN 17 IPC 8 in the WPI family of databases including WPIFV  
NEWS 13 JAN 30 Saved answer limit increased  
NEWS 14 JAN 31 Monthly current-awareness alert (SDI) frequency  
added to TULSA  
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visualization results  
NEWS 16 FEB 22 Status of current WO (PCT) information on STN  
NEWS 17 FEB 22 The IPC thesaurus added to additional patent databases on STN  
NEWS 18 FEB 22 Updates in EPFULL; IPC 8 enhancements added  
  
NEWS EXPRESS FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,  
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
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V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT  
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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 10:20:52 ON 24 FEB 2006

=> file agricola caplus biosis		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'AGRICOLA' ENTERED AT 10:21:12 ON 24 FEB 2006

FILE 'CAPLUS' ENTERED AT 10:21:12 ON 24 FEB 2006  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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FILE 'BIOSIS' ENTERED AT 10:21:12 ON 24 FEB 2006  
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=> s (2/3 allergen or allergen)  
 MISSING OPERATOR

=> s 2/3 allergen or allergen  
 MISSING OPERATOR

=> s allergen  
 L1 47903 ALLERGEN

=> s pollen  
 L2 85128 POLLEN

=> s expansin  
 L3 713 EXPANSIN

=> s (transgenic or transform?)  
 L4 1017224 (TRANSGENIC OR TRANSFORM?)

=> s (l1 and l2 and l3 and l4)  
 L5 1 (L1 AND L2 AND L3 AND L4)

=> s l1 and l4  
 L6 1037 L1 AND L4

=> s l1 and l2 and l3  
 L7 42 L1 AND L2 AND L3

=> s l1 and l2 and l4  
 L8 130 L1 AND L2 AND L4

=> dup rem l8  
 PROCESSING COMPLETED FOR L8  
 L9 107 DUP REM L8 (23 DUPLICATES REMOVED)

=> s lol  
 L10 498 LOL

=> s lol p?  
 TERM 'P?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED  
 TERM 'P?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED  
 TERM 'P?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED  
 COMMAND INTERRUPTED

If this message appears repeatedly, please notify the Help Desk.  
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=> end

ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF  
LOGOFF? (Y)/N/HOLD:

LOGOFF? (Y)/N/HOLD:

LOGOFF? (Y)/N/HOLD:

LOGOFF? (Y)/N/HOLD:n

=> d his

(FILE 'HOME' ENTERED AT 10:20:52 ON 24 FEB 2006)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 10:21:12 ON 24 FEB 2006

L1 47903 S ALLERGEN  
L2 85128 S POLLEN  
L3 713 S EXPANSIN  
L4 1017224 S (TRANSGENIC OR TRANSFORM?)  
L5 1 S (L1 AND L2 AND L3 AND L4)  
L6 1037 S L1 AND L4  
L7 42 S L1 AND L2 AND L3  
L8 130 S L1 AND L2 AND L4  
L9 107 DUP REM L8 (23 DUPLICATES REMOVED)  
L10 498 S LOL

=> s lol?

L11 29481 LOL?

=> s (lol p I or lol p II or lol p III or lol p 1 or lol p 2 or lol p 3)

L12 234 (LOL P I OR LOL P II OR LOL P III OR LOL P 1 OR LOL P 2 OR LOL P 3)

=> s (l1 and l2 and l4 and l10)

L13 12 (L1 AND L2 AND L4 AND L10)

=> dup rem l13

PROCESSING COMPLETED FOR L13

L14 8 DUP REM L13 (4 DUPLICATES REMOVED)

=> d l14 1-8 ab

L14 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

AB The present invention provides nucleic acids and polypeptide sequences for a novel class of expansin-related proteins, designated group 2/3 **allergen**, which comprise the group 2 and group 3 **allergens** from grass, a purified group 3 **allergen** Lol p 3, and method of using the nucleic acids sequences and proteins of the invention. Group 2/3 **allergens** of the invention are significant wall-loosening agents. They are capable of altering cell wall properties, which may effect growth, flexibility, and mech. strength in tissues in which they are expressed.

L14 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

AB Ryegrass **pollen** (Lolium species) is a widespread source of airborne **allergens** and is a major cause of hayfever and seasonal allergic asthma, which affect approx. 25% of the population in cool temperate climates. The main **allergens** of ryegrass **pollen** are the proteins Lol p 1 and Lol p 2. These proteins belong to two major classes of grass **pollen allergens** to which over 90% of **pollen**-allergic patients are sensitive. The functional role in planta of these **pollen allergen** proteins remains largely unknown. Here we describe the

generation and anal. of **transgenic** plants with reduced levels of the main ryegrass **pollen allergens**, **Lol p 1** and **Lol p 2**, in the most important worldwide cultivated ryegrass species, *L. perenne* and *L. multiflorum*. These **transgenic** plants will allow the study of the functional role in planta of these **pollen** proteins and the determination of potential for development of hypo-allergenic ryegrass cultivars.

L14 ANSWER 3 OF 8 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
AB Grass allergy is a world wide problem and perennial ryegrass, *Lolium perenne*, is a major cause of it. Human allergic responses to **Lol p 1**, **p 2**, and **p 3** antigens are associated with HLA. We investigated the role of HLA-DQ molecules in ryegrass allergy using **transgenic** mice expressing DQ6 and DQ8 genes in Class II deficient mice. To identify DQ-restricted T cell epitopes on the **Lol p 3**, mice were immunized and LNC were challenged with peptides spanning the **allergen**. We have found that DQ6 and DQ8 mice recognize different epitopes. Primed with ryegrass extract, DQ6 mice responded robustly to peptide 11-30 and moderately to peptide 1-20 and four determinants at the carboxyl terminus. Mice were actively sensitized and challenged with **allergen** via the airways. Both DQ6 and DQ8 mice developed pulmonary eosinophilia and Th2 type cytokines. Intranasal challenge with naturally processed epitopes elicited significant BAL eosinophilia as opposed to the nonstimulatory peptides. The use of **transgenic** mice to determine the HLA restriction of the **allergen** specific T cell response will aid us in understanding their involvement in the regulation of the allergic response and development of new treatment strategies.

L14 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2  
AB Hay fever and allergic asthma triggered by grass **pollen allergens** affect .apprx.20% of the population in cool temperate climates. Ryegrass is the dominant source of **allergens** due to its prodigious airborne **pollen** production **Lol p 5** or group 5 is among the most important and widespread grass **pollen allergen** because it reacts with IgE antibodies of more than 90% of grass **pollen**-allergic patients, contains most of the grass **pollen**-specific IgE epitopes and elicits strong biol. responses. Significant efforts have been made in developing diagnostic and therapeutic reagents for designing new and more effective immunotherapeutic strategies for treatment of allergic diseases. An alternative approach to this problem could be to reduce the amount of **allergen** content in the source plant. High velocity microprojectile bombardment was used to genetically engineer ryegrass. Antisense construct targeted to one of major **allergen**, **Lol p 5**, was introduced. The expression of antisense RNA was regulated by a **pollen**-specific promoter. **Pollen** was analyzed for IgE reactivity. Anal. of proteins with **allergen**-specific monoclonal and polyclonal antibodies did not detect **Lol p 5** in the **transgenic pollen**. The **transgenic pollen** showed remarkably reduced allergenicity as reflected by low IgE binding capacity of **pollen** extract as compared to control **pollen**. The **transgenic** ryegrass plants in which **Lol p 5** gene expression is perturbed showed normal fertile **pollen** development. Our studies showed that it is possible to selectively "switch off" **allergen** production in **pollen** of ryegrass demonstrating feasibility of genetic engineering of plants for reduced allergenicity.

L14 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
AB The present invention discloses **transgenic** plants expressing therapeutically active proteins, preferably from their plastid genome or targeted to the vacuole. The present invention also describes the administration of such **transgenic** plants to a host in need

thereof for the prevention or treatment of diseases. In a preferred embodiment, such plants or matter derived from such plants is administered orally to a host. Thus, **allergen** expression vectors for tobacco plastids are prepared

L14 ANSWER 6 OF 8 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN DUPLICATE 3

AB Type 1 allergic reactions, such as hay fever and allergic asthma, triggered by grass **pollen allergens** are a global health problem that affects approximately equal to 20% of the population in cool, temperate climates. Ryegrass is the dominant source of **allergens** because of its prodigious production of airborne **pollen**. **Lol p 5** is the major allergenic protein of ryegrass **pollen**, judging from the fact that almost all of the individuals allergic to grass **pollen** show presence of serum IgE antibodies against this protein. Moreover, nearly two-thirds of the IgE reactivity of ryegrass **pollen** has been attributed to this protein. Therefore, it can be expected that down-regulation of **Lol p 5** production can significantly reduce the allergic potential of ryegrass **pollen**. Here, we report down-regulation of **Lol p 5** with an antisense construct targeted to the **Lol p 5** gene in ryegrass. The expression of antisense RNA was regulated by a **pollen**-specific promoter. Immunoblot analysis of proteins with **allergen**-specific antibodies did not detect **Lol p 5** in the **transgenic pollen**. The **transgenic pollen** showed remarkably reduced allergenicity as reflected by low IgE binding capacity of **pollen** extract as compared with that of control **pollen**. The **transgenic** ryegrass plants in which **Lol p 5** gene expression is perturbed showed normal fertile **pollen** development, indicating that genetic engineering of hypoallergenic grass plants is possible.

L14 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

AB The present invention relates generally to **transgenic** grass and to a method of producing same. More particularly, the present invention is directed to **transgenic** grass of the group Monocotyledoneae. The **transgenic** grass of the present invention exhibits the potential to express a range of beneficial traits such as reduced allergenicity, enhanced nutritional content and increased disease resistance. The **transgenic** grass is regenerated from a callus, the cells of which are subjected to microparticle bombardment and/or Agrobacterium-mediated transfer of genetic material. The callus is subjected to **transformation** and regeneration on a solid support. Regeneration comprises culturing **transformed** cells in medium containing rooting and shooting hormones and then culturing the resulting shoots on a medium in the absence of hormones.

L14 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

AB The cDNA is presented encoding the major allergenic protein **Lol pI** from **pollen** of ryegrass, *Lolium perenne*, and to derivs. and homologs thereof and to immunol.-related allergenic proteins. The promoter for **Lol pI** and expression vectors comprising the promoter are also provided. The method for cloning the cDNA comprises the steps of (1) extracting RNA from ryegrass **pollen**, and selecting poly(A)+ mRNA by affinity chromatog. to serve as a template for synthesis of single-stranded cDNA, (2) synthesizing and isolating double-stranded cDNA, (3) constructing a  $\lambda$ gt11 cDNA expression library, (4) screening the library after induction with IPTG using monoclonal antibodies reactive with the allergenic protein from *Lolium perenne* to probe duplicate filter lifts and identifying and isolating pos. phage plaques, (5) plating the plaques at low d. and conducting duplicate filter lifts of the plaques, (6) screening the phage plaques containing clones

producing protein **allergen** by incubation with monoclonal antibodies, (7) recovering the cDNA insert from allergic antisera and antibody pos. phage, and (8) inserting the inserts into a plasmid vector for sequencing and expression. The cDNA sequence can be used for **pollen**-specific expression, as a method of inhibiting **pollen** development or function and inducing nuclear male sterility, and for immunotherapy of allergy.

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(FILE 'HOME' ENTERED AT 10:20:52 ON 24 FEB 2006)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 10:21:12 ON 24 FEB 2006

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L1      47903 S ALLERGEN
L2      85128 S POLLEN
L3      713 S EXPANSIN
L4      1017224 S (TRANSGENIC OR TRANSFORM?)
L5      1 S (L1 AND L2 AND L3 AND L4)
L6      1037 S L1 AND L4
L7      42 S L1 AND L2 AND L3
L8      130 S L1 AND L2 AND L4
L9      107 DUP REM L8 (23 DUPLICATES REMOVED)
L10     498 S LOL
L11     29481 S LOL?
L12     234 S (LOL P I OR LOL P II OR LOL P III OR LOL P 1 OR LOL P 2 OR LO
L13     12 S (L1 AND L2 AND L4 AND L10)
L14     8 DUP REM L13 (4 DUPLICATES REMOVED)
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=> d 17 1-42 ti

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L7  ANSWER 1 OF 42  AGRICOLA  Compiled and distributed by the National
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    (2006) on STN
TI  Purification and characterization of four beta-expansins (Zea m
    1 isoforms) from maize pollen.

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    (2006) on STN
TI  Expansin-like molecules: novel functions derived from common
    domains.

L7  ANSWER 3 OF 42  AGRICOLA  Compiled and distributed by the National
    Agricultural Library of the Department of Agriculture of the United States
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    (2006) on STN
TI  Pollination modulates expression of the PPAL gene, a pistil-specific beta-
expansin.

L7  ANSWER 4 OF 42  AGRICOLA  Compiled and distributed by the National
    Agricultural Library of the Department of Agriculture of the United States
    of America.  It contains copyrighted materials.  All rights reserved.
    (2006) on STN
TI  Grass group I pollen allergens (beta-expansins
    ) lack proteinase activity and do not cause wall loosening via
    proteolysis.

L7  ANSWER 5 OF 42  AGRICOLA  Compiled and distributed by the National
    Agricultural Library of the Department of Agriculture of the United States
    of America.  It contains copyrighted materials.  All rights reserved.
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- TI Expression and processing of a hormonally regulated beta-**expansin** from soybean.
- L7 ANSWER 6 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN
- TI Cytokinin regulates the expression of a soybean beta-expansion gene by a post-transcriptional mechanism.
- L7 ANSWER 7 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN
- TI Group I **allergens** of grass **pollen** as cell wall-loosening agents.
- L7 ANSWER 8 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI **Pollen allergens** are restricted to few protein families and show distinct patterns of species distribution
- L7 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI The **expansin** superfamily
- L7 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Male-sterile mutation alters Zea m 1 ( $\beta$ - **expansin** 1) accumulation in a maize mutant
- L7 ANSWER 11 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Group 2/3 **allergens** of grass **pollen** with **expansin**-like cell wall-loosening activity for applications in paper, wood, textile and biofuel industries
- L7 ANSWER 12 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI  $\beta$ - **expansins** as cell wall loosening agents identified from Arabidopsis thaliana, compositions thereof and methods of use
- L7 ANSWER 13 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Purification and characterization of four  $\beta$ - **expansins** (Zea m 1 isoforms) from maize **pollen**
- L7 ANSWER 14 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Homology modeling of the cellulose-binding domain of a **pollen allergen** from rye grass: structural basis for the cellulose recognition and associated allergenic properties
- L7 ANSWER 15 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Properties of group I **allergens** from grass **pollen** and their relation to cathepsin B, a member of the C1 family of cysteine proteinases
- L7 ANSWER 16 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Pollination modulates expression of the PPAL gene, a pistil-specific  $\beta$ - **expansin**
- L7 ANSWER 17 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI **Expansin**-like molecules: novel functions derived from common domains
- L7 ANSWER 18 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Antiserum against a stigma-exudate protein of tobacco, SE32, which was identical with PPAL, a  $\beta$ - **expansin**-like protein specific to stigma, cross-reacted with another stigma-exudate protein, SE35



L7 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Grass group I **pollen allergens** ( $\beta$ -**expansins**) lack proteinase activity and do not cause wall loosening via proteolysis

L7 ANSWER 20 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Expression and processing of a hormonally regulated  $\beta$ -**expansin** from soybean

L7 ANSWER 21 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Grass group I **allergens** ( $\beta$ -**expansins**) are novel, papain-related proteinases

L7 ANSWER 22 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Cytokinin regulates the expression of a soybean  $\beta$ - **expansin** gene by a post-transcriptional mechanism

L7 ANSWER 23 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Group I **allergens** of grass **pollen** as cell wall-loosening agents

L7 ANSWER 24 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 TI Nomenclature for members of the **expansin** superfamily of genes and proteins.

L7 ANSWER 25 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 TI Male-sterile mutation alters Zea m 1 (beta-**expansin** 1) accumulation in a maize mutant.

L7 ANSWER 26 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 TI Plant allergic proteins and their biological functions.

L7 ANSWER 27 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 TI Purification and characterization of four beta-**expansins** (Zea m 1 isoforms) from maize **pollen**.

L7 ANSWER 28 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 TI Further analysis of **pollen** beta-**expansins** (group-1 **allergens**): Evolutionary distribution and synergy with cellulases.

L7 ANSWER 29 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 TI Purification and characterization of four beta-**expansins** (Zea m 1) from maize **pollen**.

L7 ANSWER 30 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 TI beta-**Expansins** (grass **pollen** group 1 **allergens**) lack protease activity.

L7 ANSWER 31 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 TI Wall sensitivity to, and expression of, **pollen** beta-**expansins** in the monocotyledons.

L7 ANSWER 32 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 TI Analysis of maize group-1 **pollen allergen**, Zea m1.

L7 ANSWER 33 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on  
STN  
TI Homology modeling of the cellulose-binding domain of a **pollen  
allergen** from rye grass: Structural basis for the cellulose  
recognition and associated allergenic properties.

L7 ANSWER 34 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on  
STN  
TI Properties of group I **allergens** from grass **pollen** and  
their relation to cathepsin B, a member of the C1 family of cysteine  
proteinases.

L7 ANSWER 35 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on  
STN  
TI Pollination modulates expression of the PPAL gene, a pistil-specific beta-  
**expansin**.

L7 ANSWER 36 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on  
STN  
TI **Expansin**-like molecules: Novel functions derived from common  
domains.

L7 ANSWER 37 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on  
STN  
TI Antiserum against a stigma-exudate protein of tobacco, SE32, which was  
identical with PPAL, a beta-**expansin**-like protein specific to  
stigma, cross-reacted with another stigma-exudate protein, SE35.

L7 ANSWER 38 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on  
STN  
TI Grass group I **pollen allergens** (beta-**expansins**  
) lack proteinase activity and do not cause wall loosening via  
proteolysis.

L7 ANSWER 39 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on  
STN  
TI Expression and processing of a hormonally regulated beta-**expansin**  
from soybean.

L7 ANSWER 40 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on  
STN  
TI Grass group I **allergens** (beta-**expansins**) are novel,  
papain-related proteinases.

L7 ANSWER 41 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on  
STN  
TI Cytokinin regulates the expression of a soybean beta-**expansin**  
gene by a post-transcriptional mechanism.

L7 ANSWER 42 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on  
STN  
TI Group I **allergens** of grass **pollen** as cell  
wall-loosening agents.

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L11   29481 S LOL?  
L12       234 S (LOL P I OR LOL P II OR LOL P III OR LOL P 1 OR LOL P 2 OR LO  
L13       12 S (L1 AND L2 AND L4 AND L10)  
L14       8 DUP REM L13 (4 DUPLICATES REMOVED)